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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/641,917	08/21/2000	Hideyuki Watanabe	196197US2	8007

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EXAMINER

PARK, CHAN S

ART UNIT PAPER NUMBER

2622

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/641,917

Applicant(s)

WATANABE, HIDEYUKI

Examiner

CHAN S PARK

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6 & 7.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-27 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Hikawa.

1. With respect to claim 1, Hikawa discloses an image processing method comprising the steps of:

(a) carrying out, in parallel, processes of two or more functions of an image reading function (ITT control section 6), an image recording function (IOT control section 11), an image copying function (fig. 2 & col. 4, line 42 – col. 5, line 16) and an image communicating function (fax line control section in col. 3, line 62 – col. 4, line 2); and

(b) automatically storing a file of the image data processed by said step (a) independently of the processes (col. 3, lines 35-45 & col. 4, lines 28-39).

2. With respect to claim 2, Hikawa discloses the image processing method as claimed in claim 1, wherein said step (a) stores the file of the image data in storing

means which is provided internally or externally to one image processing apparatus which has each of the functions (col. 3, lines 35-45).

3. With respect to claim 3, Hikawa discloses the image processing method as claimed in claim 2, wherein said step (a) transfers the image data processed by each of the functions on one or a plurality of buses within the image processing apparatus (fig. 1).

4. With respect to claim 4, Hikawa discloses the image processing method as claimed in claim 2, wherein said step (a) carries out the processes of the two or more functions in response to an internal command and/or an external command of the image processing apparatus (col. 5, lines 38-46 & col. 2, lines 15-24).

5. With respect to claim 5, Hikawa discloses the image processing method as claimed in claim 4, wherein the external command is issued from one or a plurality of external apparatus coupled to the image processing apparatus via a network (col. 4, lines 3-14).

6. With respect to claim 6, Hikawa discloses the image processing method as claimed in claim 1, wherein said step (b) stores the file of the image data by adding specific information which enables identification of the file. Note that assigning specific information or address to the image file stored in the memory is a inherent step since the image forming apparatus must identify each files to perform the image processing based on the priority assigned and commands.

7. With respect to claim 7, Hikawa discloses an image processing apparatus (image forming apparatus 100) comprising:

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a scanner which reads a document and outputs image data (col. 3, lines 54-61);

a facsimile communication unit which transmits and receives image data via a communication line (col. 3, line 62 – col. 4, line 2);

a plotter which records an image on a recording medium based on image data (col. 4, lines 21-28); and

a control unit (job control section 2), responsive to a command, controlling two or more of said scanner, said facsimile communication unit and said plotter to carry out processes to process the image data in parallel (col. 3, lines 1-17; col. 7, lines 23-31 & step 105 in fig. 5),

said control unit automatically storing a file of the image data processed in parallel in a storage unit, independently of the processes (col. 3, lines 35-53).

8. With respect to claim 8, Hikawa discloses an image processing apparatus comprising:

image reading means for reading a document and outputs image data (col. 3, lines 54-61);

image communicating means for communicating image data via a communication line (col. 3, line 62 – col. 4, line 2);

image recording means for recording an image on a recording medium based on image data (col. 4, lines 21-28); and

control means (job control section 2), responsive to a command, controlling two or more of said image reading means, said image communicating means and said

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image recording means to carry out processes to process the image data in parallel (col. 3, lines 1-17; col. 7, lines 23-31 & step 105 in fig. 5),

said control means automatically storing a file of the image data processed in parallel in storing means, independently of the processes (col. 3, lines 35-53).

9. With respect to claim 9, Hikawa discloses the image processing apparatus as claimed in claim 8, wherein said storing means is provided internally or externally to the image processing apparatus (col. 3, lines 35-45).

10. With respect to claim 10, Hikawa discloses the image processing apparatus as claimed in claim 9, further comprising:

one or a plurality of buses transferring the image data processed by said image reading means, said image communicating means and said image recording means within the image processing apparatus (fig. 1).

11. With respect to claim 11, Hikawa discloses the image processing apparatus as claimed in claim 9, wherein said control means controls two or more of said image reading means, said image communicating means and said image recording means to process the image data in parallel in response to an internal command (operational section 1) and/or an external command (host computer) to the image processing apparatus (col. 3, lines 13-21 & col. 4, lines 3-6).

12. With respect to claim 12, Hikawa discloses the image processing apparatus as claimed in claim 11, wherein the external command is issued from one or a plurality of external terminals coupled to the image processing apparatus via a network (col. 4, lines 3-6).

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13. With respect to claim 13, Hikawa discloses the image processing apparatus a claimed in claim 8, wherein said control means stores the file of the image data in the storing means by adding specific information which enables identification of the file. Note that assigning specific information or address to the image file stored in the memory is a inherent step since the image forming apparatus must identify each files to perform the image processing based on the priority assigned and commands.

14. With respect to claim 14, Hikawa discloses an image processing apparatus (image forming apparatus 100) comprising:

- an image data bus line (system bus 14) transferring image data in real-time;

- image reading means (ITT control system 6) for reading a document image and outputting read image data to said image data bus line in real-time (col. 3, lines 54-61 & col. 4, lines 42-62);

- image communicating means (network control section 9 or fax line control section 8) for receiving image data from a communication line (LAN in col. 4, lines 3-6) to output received image data to said image data bus line, and for receiving transmitting image data from said image data bus line in real-time to transmit the transmitting image data to the communication line (transmitting fax in col. 3, line 62 – col. 4, line 2);

- image recording means for receiving recording image data from said image data bus line and recording an image on a recording medium based on the recording image data (col. 5, lines 9-16);

- control means (job control section 2) for controlling one of said image reading means, said image communicating means and said image recording means which is

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unused for the processing of the image data to process the image data in parallel, in response to a command which is received during processing of the image data to carry out at least one of a reading operation by said image reading means, a recording operation by said image recording means, a transmitting operation by said image communicating means and a receiving operation by said image communication means (col. 3, lines 1-17; col. 7, lines 23-31 & step 105 in fig. 5);

a buffer temporarily storing (DRAM or band buffer memory) the read image data, the transmitting image data and the received image data on said image data bus line (col. 3, lines 35-45);

a DMA transfer bus line which is used to transfer the image data within said buffer by a DMA transfer;

image transfer means for transferring the image data within said buffer to said DMA transfer bus line based on a DMA transfer request which is received at a preset timing; and

image storing means for storing the image data on said DMA transfer bus line.

Referring to col. 6, line 44, Hikawa teaches that the image processing system has a DMA controller. Citing the definition of DMA from the copy of submitted dictionaries, it is used for data transfer directly between memory and a hard disk without an involvement of the microprocessor. Thus, it is inherent that there must be a DMA transfer bus line used for transferring the image data to be stored in either DRAM or/and HDD.

Furthermore, Hikawa discloses the method of transferring the image data at the user defined or predetermined time period (col. 10, lines 33-41). Based on the user's preference, the priority assigned to different jobs are changed and processed in the order defined. Thus, transferring the image data using the DMA transfer bus line is performed at a preset timing.

15. With respect to claim 15, Hikawa discloses the image processing apparatus as claimed in claim 14, wherein:

said image data bus line includes a first image data bus line and a second image data bus line which are independently usable by operations carried out in parallel (col. 3, lines 35-45 & col. 4, lines 28-39); and

said buffer includes a first buffer which temporarily stores image data on the first image data bus line (DRAM), and a second buffer which temporarily stores image data on the second image data bus line (HDD).

Although, two distinct bus lines are not explicitly shown, it is inherent that two bus lines are present (one connected to DRAM and another connected to HDD) in the system for transferring and exchanging image data among resources.

16. With respect to claim 16, Hikawa discloses the image processing apparatus as claimed in claim 14, wherein the DMA transfer request is supplied to said image transfer means when a storage capacity of said buffer occupied by the image data reaches a predetermined preset value (col. 5, lines 17-27 & col. 6, lines 28-52)).

17. With respect to claim 17, Hikawa discloses the image processing apparatus as claimed in claim 15, wherein said image transfer means carries out a DMA transfer of

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the image data within the first buffer or the second buffer depending on a preset priority order when DMA transfer requests for the image data within the first and second buffers are received simultaneously (col. 2, lines 10-14; col. 5, lines 37-46 & col. 10, lines 33-41).

18. With respect to claim 18, Hikawa discloses the image processing apparatus as claimed in claim 17, wherein the priority order is alternately switched every time the DMA transfer requests for the image data within the first and second buffers are received simultaneously (default priorities in col. 10, lines 19-32).

19. With respect to claim 19, Hikawa discloses the image processing apparatus as claimed in claim 14, wherein said image storing means includes first and second image storing means (DRAM and HDD) for storing the image data on said DMA transfer bus line, and the image data within said first image storing means is transferred to and stored in said second image storing means (col. 3, lines 35-45 & col. 5, lines 38-46).

20. With respect to claim 20, Hikawa discloses the image processing apparatus as claimed in claim 19, wherein said first image storing means is made up of a memory (DRAM or page memory in col. 3, lines 35-45).

21. With respect to claim 21, Hikawa discloses the image processing apparatus as claimed in claim 19, wherein said second image storing means is made up of a hard disk drive (HDD in col. 3, lines 46-53).

22. With respect to claim 22, Hikawa discloses an image processing system comprising:

an image processing apparatus including:

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image reading means (ITT control system 6) for reading a document and outputs image data (col. 3, lines 54-61 & col. 4, lines 42-62);

image communicating means (network control section 9 or fax line control section 8) for communicating image data via a communication line (LAN in col. 4, lines 3-6);

image recording means (IOT control section 11) for recording an image on a recording medium based on image data (col. 5, lines 9-16); and

control means (job control section 2), responsive to a command (col. 10, lines 19-26), controlling two or more of said image reading means, said image communicating means and said image recording means to carry out processes to process the image data in parallel (col. 3, lines 1-17; col. 7, lines 23-31 & step 105 in fig. 5);

an electronic filing apparatus (host computer) coupled to said image processing apparatus; and

a storage unit (specific memory location in col. 4, line 10) coupled to said electronic filing apparatus,

said control means automatically storing a file of the image data processed in parallel in said storage unit, independently of the processes (col. 4, lines 28-32 & col. 5, lines 37-46).

23. With respect to claim 23, Hikawa discloses the image processing system as claimed in claim 22, wherein said image processing apparatus and said electronic filing apparatus are coupled via a network (col. 4, lines 3-14).

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24. With respect to claim 24, Hikawa discloses the image processing system as claimed in claim 23, wherein said image processing apparatus further includes network connecting means (network control section 9) for connecting said image processing apparatus to said network (col. 4, lines 3-14).

25. With respect to claim 25, Hikawa discloses an image processing system (image forming apparatus 100) comprising:

an image processing apparatus including:

an image data bus line (system bus 14) transferring image data in real-time;

image reading means (ITT control system 6) for reading a document image and outputting read image data to said image data bus line in real-time (col. 3, lines 54-61 & col. 4, lines 42-62);

image communicating means (network control section 9 or fax line control section 8) for receiving image data from a communication line (LAN in col. 4, lines 3-6) to output received image data to said image data bus line, and for receiving transmitting image data from said image data bus line in real-time to transmit the transmitting image data to the communication line (transmitting fax in col. 3, line 62 – col. 4, line 2);

image recording means (IOT control section 11) for receiving recording image data from said image data bus line and recording an image on a recording medium based on the recording image data (col. 5, lines 9-16);

control means (job control section 2) for controlling one of said image reading means, said image communicating means and said image recording means

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which is unused for the processing of the image data to process the image data in parallel, in response to a command which is received during processing of the image data to carry out at least one of a reading operation by said image reading means, a recording operation by said image recording means, a transmitting operation by said image communicating means and a receiving operation by said image communication means (col. 3, lines 1-17; col. 7, lines 23-31 & step 105 in fig. 5);

a buffer temporarily (DRAM or band buffer memory) storing the read image data, the transmitting image data and the received image data on said image data bus line (col. 3, lines 35-45);

a DMA transfer bus line which is used to transfer the image data within said buffer by a DMA transfer;

image transfer means for transferring the image data within said buffer to said DMA transfer bus line based on a DMA transfer request which is received at a preset timing;

and image storing means for storing the image data on said DMA transfer bus line;

an electronic filing apparatus coupled to said image processing apparatus (host computer); and

a storage unit (specific memory location in col. 4, line 10) coupled to said electronic filing apparatus,

said electronic filing apparatus automatically storing a file of the image data processed in parallel within said image processing apparatus into said storage unit,

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independently of the reading, recording, transmitting and receiving operations in said image processing apparatus (col. 4, lines 28-32 & col. 5, lines 37-46).

Referring to col. 6, line 44, Hikawa teaches that the image processing system has a DMA controller. Citing the definition of DMA from the copy of submitted dictionaries, it is used for data transfer directly between memory and a hard disk without an involvement of the microprocessor. Thus, it is inherent that there must be a DMA transfer bus line used for transferring the image data to be stored in either DRAM or/and HDD.

Furthermore, Hikawa discloses the method of transferring the image data at the user defined or predetermined time period (col. 10, lines 33-41). Based on the user's preference, the priority assigned to different jobs are changed and processed in the order defined. Thus, transferring the image data using the DMA transfer bus line is performed at a preset timing.

26. With respect to claim 26, Hikawa discloses the image processing system as claimed in claim 25, wherein said image processing apparatus and said electronic filing apparatus are coupled via a network (col. 4, lines 3-14).

27. With respect to claim 27, Hikawa discloses the image processing system as claimed in claim 26, wherein said image processing apparatus further includes network connecting means (network control section 9) for connecting said image processing apparatus to said network (col. 4, lines 3-14).


Contact Information

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAN S PARK whose telephone number is (703) 305-2448. The examiner can normally be reached on M-F 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on (703) 305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

csp
April 27, 2004

Chan S. Park
Examiner
Art Unit 2622

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